TECHNOLOGICAL PROCESSING OF OIL SLUDGE

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Quick increase of the scientific and technological revolution temps and influence of human on the nature becomes more and more powerful each year. A numerous toxic substances are emitted into the biosphere and that leads to undiserable effects. One of the most polluting branches is petrochemical industry. That's why, the recovery of oil waste is one of the most actual ecological problems

Considering all main world tendencies in petrochemical industry, it should be mentioned that Ukrainian oil refineries realize the closed cycle principle which means using waste as a raw in technological process. This way allows to create a technology with the least amount of waste and decrease the negative influence of waste on the environment and produce the great amount of secondary raw as well. For realization of proposed method the waste samples were taken from the settling pit at the oil refinery and previously dehydrated. Also the mechanical admixtures were removed by demulsifying agent "Proksamin" addition and further settling during 3 hours at 343 K. After preparation samples are getting to light thermal cracking.

The output products in this process were gas, middle distillates with boiling point about 530 – 650 K and coke residue. The cracking gas yield amounts to 3 vol % for oil waste taken from Kremenchug oil refinery and 2 vol % for waste taken from Atyrau oil refinery (Atyrau, Kazakhstan). The coke residue amounts to 14% of waste from Kremenchug and 36 % of waste from Atyrau. The losses amount to 1,5 and 2 % respectively. Products of thermal cracking of oil waste, due to their properties, may be widely used in motor oil and other kinds of fuel production.

A gasoline fraction, after it's purification from sulphur-containing and resinous components, may be used as a component commodity gasoline compounding or in oil solvents production. A kerosene fraction, after it's deep purification from water, sulphur-containing and resinous components, may be used in a jet fuel production and as lighting kerosene. A fuel oil or tar is completely avialible for boil fuel production and as a crude for motor fuel, distillate base oil, oil coke production by pyrolysis, a crude for road and building bitumen production.